



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,032	03/23/2005	Kyung-Tae Kim	5387-012	9055
20575 7590 09/06/2007 MARGER JOHNSON & MCCOLLOM, P.C. 210 SW MORRISON STREET, SUITE 400 PORTLAND, OR 97204			EXAMINER FISHER, ELANA BETH	
			ART UNIT 3709	PAPER NUMBER
			MAIL DATE 09/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,032

Applicant(s)

KIM ET AL.

Examiner

Elana B. Fisher

Art Unit

3709

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/23/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/23/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☒ Other: See Continuation Sheet.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "40" has been used to designate both the stabilizer in Figure 2 and the stabilizer in Figure 9. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:
 - a. number 140 (FIG 9)

Art Unit: 3709

b. number 230a (FIG 10)

c. number 40 (FIG 9)

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Claim 3 is objected to because of the following informalities:

Regarding claim 3, it is stated that "said fixing plates are formed at lateral surfaces thereof with grooves for hitching...", however there are no grooves on the fixing plates that are disclosed in the specification. On the other hand, there are grooves distinctly pointed out on the distal ends of the chest correction bar (FIG 2, number 31) therefore, in light of the specification the "grooves" claimed in claim 3 will be taken to mean the grooves on the distal ends of the chest correction bar for the purpose of examining. It is suggested to replace the stated "fixing plates" with "chest correction bar" so as to be consistent with the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, and 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Nuss et al. (U.S. Patent 6,024,759).

a. Regarding claim 1, Nuss et al. teaches an apparatus involving a chest correction bar (FIG 1, number 10) that is used in correcting pectus excavatum on a deformed sternum (Column 2, lines 23-24). The chest correction bar contains recesses along the lengthwise direction (FIG 1B, shown in the space formed by the placement of two bars aligned and a third underneath the two). Additionally, the apparatus includes a stabilizer (FIG 3, number 36) and is designed for placement on the distal end of the chest correction bar (Column 6, lines 55-58). Nuss et al. teaches that the stabilizer will “ensure the pectus bar (10) is fixedly retained within the chest cavity upon implantation” (Column 7, lines 18-22), thereby preventing rotation of the chest correction bar in the body.

The stabilizer disclosed contains two fixing plates (FIG 3, upper and lower triangles) that are to be fixed to the body of the patient (Column 6, lines 55-59). There is a bridge that connects the two fixing plates (FIG 3, the channel – number 48, that is defined by the wall – number 56). Two protruders (FIG 4, numbers 60 and 62) are opposed from the fixing plates and are hitched to the recesses of the fixing plate

Art Unit: 3709

underneath the bridge as shown by figure 5, which is the underside of the fixing plates with the chest correction bar (10) placed through the channel of the stabilizer (36).

Additionally, two spaces are present between the protruders and the lateral widthwise surfaces of the bridge. In figure 3, take the lateral direction to be lengthwise through the middle of the channel and the axial direction to be the vertical length that is parallel to the left edge (longer edge) of the two plates. The spaces formed in the area underneath the two dotted lines that are in the lateral lengthwise direction. The spaces formed provide the area where the distal ends of the chest correction bar (FIG 6, number 10) can be inserted (FIG 6, stabilizer – number 36 and the chest correction bar – number 10, positioned together).

b. Regarding claim 3, in light of the specification and for the purpose of examining, the “grooves for hitching thread” (claim 3) are taken to mean the grooves on the lateral surface of the chest correction bar. Nuss et al. teaches grooves (FIG 2, number 24) on the lateral surfaces of the chest correction bar (FIG 1, number 10) as well, which are capable of being used for attaching thread to help secure the stabilizer (Column 4, lines 50-53).

c. Regarding claim 4, Nuss et al. teaches that the stabilizer has holes (FIG 3, number 64), which are capable of receiving a thread for securing it to the patient (Column 7, lines 31-33).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 3709

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nuss et al. (U.S. Patent 6,024,759) as applied to claim 1 above, and further in view of Domenig (U.S. Patent 6,125,510).

a. Regarding claim 2, Nuss et al. discloses an apparatus comprising a chest correction bar and a stabilizer as stated above in paragraph 6(a). Two protruders (FIG 4, numbers 60 and 62) are opposed from the fixing plates are disclosed as well, however Nuss et al. does not discuss the protruders composing pins that are attached to the fixing plates.

On the other hand, Domenig discloses a plate (FIG 5, number 200) with two protruders that do, in fact, compose pins so that the protruders can be attaches to another object. The protruders are shown in FIG 5, numbers 210 and 212, and they are attached to a face member (FIG 8, number 26) by means of a fastener, such as a pin (FIG 8, number 228). Hence, it would have been obvious to one skilled in the art at the time the invention was made to have protruders, as disclosed by Nuss et al., composed of pins that are attached to the fixing plate, as such is an art recognized effective alternative way of engaging protruders [opposed on a plate] to an object exemplifying the teachings of Domenig.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nuss et al. (U.S. Patent 6,024,759) as applied to claim 1 above, and further in view of Gerhardt et al. (U.S. Patent 6,183,476).

Art Unit: 3709

a. Regarding claim 5, Nuss et al. discloses a chest correction bar as discussed in paragraph 6(a) above. However, a difference in the thickness between the central portion of the bar and the distal ends, where the central portion of the bar is thinner, is not disclosed.

Gerhardt et al. teaches a plate in which there is "a reduced cross section in the middle area..." and continues to teach that the reduced cross section "gives the possibility of bending the plate in these areas without weakening the fastening areas" (Column 1, lines 65-67 and Column 2, lines 1-2). The chest correction bar that Nuss et al. teaches is fastened on its ends and "bent in a convex manner" (Column 2, lines 27-28). Therefore it would be obvious to one skilled in the art to have a chest correction bar in which the thickness of the central portion is thinner than the thickness at its ends.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Yoon-Seb Jong (KR 20-0200581) teaches an implant for the purpose of correction pectus excavatum.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elana B. Fisher whose telephone number is (571)270-3643. The examiner can normally be reached on Monday through Thursday from 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Yao can be reached on (571)272-1224. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3709

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EF



SAMCHUAN C. YAO
SUPERVISORY PATENT EXAMINER